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10/088,019	06/19/2002	Teruto Tanaka	NAK1- BR22	4938

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EXAMINER

AWAD, AMR A

ART UNIT

PAPER NUMBER

2675

DATE MAILED: 02/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/088,019

Applicant(s)

TANAKA ET AL.

Examiner

Amr Awad

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 July 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-8 and 10-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12-18 is/are allowed.
- 6) ☐ Claim(s) 1,2,4-8,10 and 11 is/are rejected.
- 7) ☒ Claim(s) 12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Claim Objections

1. Claims 4-5, 10 and 12 are objected to because of the following informalities: claims 4-5 depend on cancelled claim 3, and claim 10 depends on cancelled claim 9. For the purpose of examining the claims on the merit, Examiner will assume that claims 4-5 depend on claim 1, and claim 10 depends on claim 7. claim 12, lines 7 and 9 recite "perform" and "adjust" respectively, which should be changed to —performs—and —adjusts—. Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
3. Claims 1-2, 4-5, 7-8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saito (European Patent Publication NO. EP 0989 757 in view of Foley et al. (US patent NO. 5,510,851; hereinafter referred to as Foley).

As to independent claim 1, Saito (figures 10 and 12) teaches an image signal processing apparatus for use as a preprocessing apparatus for an image display apparatus that displays images in accordance with color image signals (abstract),

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comprising: an image signal receiving means (screen 3) for receiving a color image signal; and a chromaticity adjustment means (chromaticity sensor 4 and color conversion coefficient calculation unit 7) for performing a calculation using signal values of the received color image signal and adjusting the chromaticity of an image to be displayed by the image display apparatus for each of primary colors red, green, and blue separately (figures 1-3, page 2, line 51 through page 4, line 11, and page 12, lines 51-55).

Saito does not teach the citation of having a gamma correction means for performing a gamma correction on the color image signal.

However, Foley teaches a method and apparatus for dynamic purity correction (abstract), and wherein a gamma correction (col. 2, lines 16-24 and col. 3, lines 51-67).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include the teaching of Foley to be included to Saito's device so as motivated by Foley, to be able to rapidly calculate and apply smoothly varying correction signals in the digital domain on a pixel by pixel (col. 1, lines 59-62). Note that, there is no indication in the claim to show that performing a calculation is to adjust the chromaticity. Therefore, performing a calculation can be simply for example, performing digital to analog conversion as shown in figure 9 of Foley's device.

As to claim 2, Saito teaches that the chromaticity adjustment means includes: a matrix operation means (color processing unit 8) for multiplying the signal values of the received color image signal with a determinant; a parameter receiving means for

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receiving a predetermined parameter; and a determinant changing means for changing the determinant in accordance with the received parameter, wherein the chromaticity adjustment means adjusts the chromaticity for each primary color by performing a calculation using the changed determinant (paragraph NO. 25 in page 3).

As to independent claim 7, the claim is substantially similar to independent claim 1 and would be analyzed as previously discussed with respect to claim 1.

As to claim 8, the chromaticity adjustment means includes: a matrix operation means for multiplying the signal values of the received color image signal with a determinant; a parameter receiving means for receiving a predetermined parameter; and a determinant changing means for changing the determinant in accordance with the received parameter, wherein the chromaticity adjustment means adjusts the chromaticity for each primary color by performing a calculation using the changed determinant (paragraph NO. 25 in page 3).

As to claims 4-5, and 10 as can be seen above, Saito teaches all the limitations of claims 4-5 and 10, except the citation of having a gamma correction means for performing a gamma correction on the color image signal.

However, Foley teaches a method and apparatus for dynamic purity correction (abstract), and wherein a gamma correction (col. 2, lines 16-24 and col. 3, lines 51-67). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include the teaching of Foley to be included to Saito's device so as motivated by Foley, to be able to rapidly calculate and apply smoothly varying correction signals in the digital domain on a pixel by pixel (col. 1, lines 59-62).

4. Claims 6 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saito and Foley in view of Yajima et al. (US patent NO. 6,356,277; hereinafter referred to as Yajima).

As can be seen above, Saito teaches all the limitations of claims 6, 11 and 17 except the citation of having a YUV signal, and signal conversion means for converting the received YUV signal into an RGB signal.

However, Yajima teaches a YUV-RGB digital conversion circuit and **picture** display device (abstract) that includes chroma digital circuit (14) for supplying a YUV signal to a YUV to RGB conversion circuit (16) so that an RGB image can be displayed on the LCD (30) (figure 1 and col. 5, lines 38-65).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include the teaching of Yajima having a conversion circuit for converting YUV signal to RGB signal, to be incorporated to Saito's device so as to be able to reduce the scale of the circuit by being able to immediately convert YUV to RGB.

Allowable Subject Matter

5. Claim 18 is allowed, and claims 12-17 will be allowed after correcting the minor objection to claim 12 described above..

Response to Arguments

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6. Applicant's arguments filed 7/23/2004 have been fully considered but they are not persuasive.

With respect to the argument regarding claim 12, this argument is moot in view of indicating claim 12 as allowable subject matter.

Applicant (bottom of page 8) argued that both claims 1 and 7 claim an apparatus that performs gamma correction on a signal value prior to adjusting chromaticity, which is not taught by the cited references. Examiner respectfully disagrees. There is no indication in the claim to show that performing a calculation is to adjust the chromaticity. Therefore, performing a calculation can be simply for example, performing digital to analog conversion as shown in figure 9 of Foley's device.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.


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8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amr Awad whose telephone number is (703)308-8485. The examiner can normally be reached on Monday through Friday from 9:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sumati Lefkowitz can be reached on (703)306-0403. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A.A



AMR A. AWAD
PRIMARY EXAMINER